

ABSTRACT

The object of the invention is to provide a porous metal structure body suitable for reinforcing a light metal alloy member such as an aluminum alloy member. A mixed powder containing a metallic powder is filled in a mold, and is molded into a shape having a single cavity or plural cavities in the inner portion while having a maximum thickness of 6 mm or less at the surface portion side. The molded powder body is sintered to form into the porous metal structure body having a porosity of 20 to 50% by volume at the portions except the cavities. It is preferable that the metallic powder sintered body having a porosity of exceeding 50% by volume is formed into the cavities by being monolithically integrated with the porous metal structure body. Consequently, a structure being lightweight, having a high mechanical strength and being excellent in handling performance while being excellent in impregnability can be obtained.